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ABSTRACT

This report summarizes selected information from American College Testing (ACT) Program records (1978-79 through 1982-83) for five groups of ACT Assessment examinees: (1) examinees who indicated that they did not have a disability that might require special services from the college they planned to attend (these examinees tested on national test dates under timed conditions and used standard materials); (2) examinees who indicated that they did have a disability that might require special services from the college they planned to attend, but who tested on a national test date under timed conditions and used standard materials; (3) examinees who were specially tested because of motor (physical and learning) disabilities; (4) examinees who were specially tested because of visual disabilities; and (5) examinees who were specially tested because of auditory disabilities. Self-reported high school grades, ACT Assessment scores, and accuracy of predicted college grades are discussed. The final section of the paper includes recommendations for further research. Appended statistical tables conclude the document. (Author/KM)

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RESEARCH REPORT No. 84

Use of the ACT Assessment by Examinees With Disabilities

Joan Laing
Merine Farmer

U.S. DEPARTMENT OF EDUCATION
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April 1984

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ABSTRACT

This report summarizes selected information from ACT records (1978-79 through 1982-83) for five groups of ACT Assessment examinees:

- Examinees who indicated that they did *not* have a disability that might require special services from the college they planned to attend. These examinees tested on national test dates under timed conditions and used standard materials.
- Examinees who indicated that they *did* have a disability that might require special services from the college they planned to attend, but who tested on a national test date under timed conditions and used standard materials.
- Examinees who were specially tested because of motor (physical and learning) disabilities.
- Examinees who were specially tested because of visual disabilities.
- Examinees who were specially tested because of auditory disabilities.

Self-reported high school grades, ACT Assessment scores, and accuracy of predicted college grades are discussed. The final section of the paper includes recommendations for further research.

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USE OF THE ACT ASSESSMENT BY EXAMINEES WITH DISABILITIES

Joan Laing
Merine Farmer

Nearly a million persons take the ACT Assessment each year as part of their college planning. Even though the examinees' educational and cultural backgrounds differ, this "common task" lets each one compare his or her level of educational development with that of other ACT-tested college-bound examinees.

Some examinees with disabilities, however, are unable to take the Assessment under standard testing conditions. (Under standard conditions, examinees use regular-print test booklets and take the four subject-area tests in a timed test session of approximately three hours.) ACT provides special test forms and special testing arrangements so that examinees with disabilities may take the ACT Assessment, if they wish. However, ACT—like most other test developers—cautions that use of nonstandard materials or nonstandard conditions may mean that test results cannot be interpreted in the same way as those of examinees tested under standard conditions.

It is difficult to generalize about the interpretation of special testing results. While test developers, educational institutions, and examinees have a common interest in seeing that testing is accomplished fairly, there are many difficulties in determining whether "fairness" has been achieved. The disabilities that necessitate special testing differ in both kind and degree, and the extent to which test scores are considered in assessing a specially-tested examinee's readiness for college work must be determined on an individual basis.

There are certain legal requirements related to the testing of persons with disabilities. Section 504 of the Rehabilitation Act of 1973 (Public Law 93-112) requires that equal opportunity in educational programs and activities be made available to all qualified persons with disabilities. On the subject of college admissions tests, the regulations state that:

- The use of any admissions test that has a disproportionate adverse effect on persons with disabilities is prohibited unless the test has been validated as a predictor of the targeted educational program and alternate tests that have a less disproportionate adverse effect are not available.

- The admissions test must accurately reflect the applicant's aptitude or achievement level, or whatever the test purports to measure, rather than reflecting the applicant's impaired sensory or manual skills.

- Admissions tests for persons with disabilities must be offered in as timely a manner as are other admissions tests and in facilities that are, on the whole, accessible to these persons.

Purpose and Scope of the Report

Clearly, a great deal of research will be needed to determine the most effective way for colleges to implement the Section 504 regulations. This paper, as a starting point for such research, summarizes what is now known about the use of the ACT Assessment by examinees with disabilities.

Beginning with the 1967-68 testing year, ACT records describe the materials provided to examinees who requested special testing. Because these records include the reason for the request, it is possible to determine the numbers of registrants with different kinds of disabilities who requested special testing. These figures are shown (for the five testing years from 1978-79 through 1982-83) in Table 1. Registrants with disabilities have been separated into four categories: physical disability, learning disability, visual disability, and auditory disability. It can be seen that two of these groups have increased dramatically in size over the past five years: examinees with learning disabilities (from 480 in 1978-79 to 1555 in 1982-83) and examinees with auditory disabilities (from 26 in 1978-79 to 190 in 1982-83).

TABLE 1

Materials Used for Special Testing, by Type of Disability, From 1978-79 Through 1982-83

Type of Disability	1978-79		1979-80		1980-81		1981-82		1982-83	
Physical Disability	207	(673)[a]	205	(832)[a]	157	(1005)[a]	213	(1328)[a]	173	(1611)[a]
Learning Disability	480		679		1030		1201		1555	
Visual Disability	430	(412)	497	(418)	525	(437)	590	(481)	521	(489)
Auditory Disability	26	(24)	58	(52)	59	(47)	130	(113)	190	(182)

Note. The left-hand number in each column indicates the quantity of special testing materials sent by ACT in response to requests; the right-hand number (in parentheses) indicates the quantity completed and returned to ACT for scoring.

[a]Until 1983-84, completed tests of examinees with physical disabilities and examinees with learning disabilities were categorized together under the classification "motor disability."

Records for persons who actually completed the test materials and returned them to ACT for scoring were, through 1982-83, organized somewhat differently from records of special testing materials sent by ACT. While records of test results for examinees with visual disabilities and examinees with auditory disabilities have always been maintained separately, records of test results for examinees with physical disabilities and examinees with learning disabilities were categorized together under the classification "motor disability" until 1983-84. Therefore, records of examinees who completed special testing (enumerated in Table 1 and discussed throughout this report) were available for only three groups, rather than four. (Starting with the 1983-84 testing year, records for examinees with physical disabilities are being separated from those for examinees with learning disabilities.)

This paper presents data for these three groups of specially-tested examinees and two groups of examinees who tested under standard conditions:

- Examinees who indicated that they did *not* have a disability that might require special services from the college they planned to attend. These examinees tested on national test dates under timed conditions and used standard materials.
- Examinees who indicated that they *did* have a disability that might require special services from the college they planned to attend, but who tested on a national test date under timed conditions and used standard materials. ACT did not ask these examinees to indicate the nature of their disabilities.
- Examinees who were specially tested because of motor (physical and learning) disabilities.
- Examinees who were specially tested because of visual disabilities.
- Examinees who were specially tested because of auditory disabilities.

ACT's Services for ACT Assessment Registrants Who Need Special Testing Arrangements

ACT offers a variety of testing options to ACT Assessment registrants with disabilities. The ACT Assessment may be taken by these persons either (a) on national test dates under standard procedures; (b) on an arranged date at a location selected by the examinee, using an appropriate test format and either standard or extended-time testing procedures; or (c) on campus, using an appropriate test format and either standard or extended-time testing procedures.

Special testing sessions for persons with disabilities are offered more often and in a more timely manner than are standard testing sessions, as required by Section 504. These options, described in *The ACT Assessment Special Testing Guide*, are provided without additional cost to the examinee.

Standard Testing

Examinees with disabilities who prefer to take the Assessment on a national test date at an established test center will be accommodated if all of the following conditions are met:

1. The examinee can take the four subtests within the standard time limits and use a regular-print test booklet. (Large-type editions, braille editions, and audio cassette tapes of the ACT tests are not available at the test centers on national test dates.)

2. The examinee follows standard registration procedures for national testing and, if special arrangements will be required at the test center, encloses a letter with the registration folder explaining the special needs.

3. The test center can provide the needed facilities and/or personnel.

4. The special arrangements will not be disruptive to other examinees.

Special Testing

Special testing is available for examinees with physical or perceptual disabilities who cannot attend established test centers or cannot take the tests within the allotted time using regular-type test booklets. (Special testing is also available to other examinees who meet one of the following criteria: hospitalization, or confinement to a correctional institution, on all scheduled test dates; restriction by religious conviction to non-Saturday testing *if* no non-Saturday test center is available within fifty miles of their homes; or residence in a country where ACT does not have test centers.) Special testing scores are designated as "Arranged" on the examinee's ACT Assessment College Report unless extended time was used, in which case they are designated as "Special." The reason for special testing is not reported to colleges.

Persons with disabilities who request special testing must be professionally diagnosed, and proper documentation of the disability must be sent to ACT with the Registration Form for Special Testing. Diagnosis and certification of the disability must be provided by a qualified professional with appropriate credentials—for instance, a physician for physical disabilities, a learning disability specialist or psychologist for learning disabilities, etc. (Examinees with learning disabilities, who are often diagnosed in the early school years, may present prior official school records about the disability or a letter from their counselor certifying the contents of such records to support a request for special testing arrangements.)

Special testing must be supervised; the supervisor is paid by ACT. An institution may designate a supervisor, or the examinee may request a teacher or counselor to serve as supervisor. The supervisor must be proficient in English and may not be a member of the examinee's immediate family. Special testing may be administered at a time and place mutually convenient for examinee and supervisor, except that it must not be scheduled for any of ACT's five national test dates.

Nonstandard test materials and conditions may be arranged for examinees with disabilities. Extended time may be requested for these examinees as listed below; the amount of time they may use is not limited. The four subtests may be administered in separate sessions, which may be on separate days. Each subtest must, however, be taken in its entirety during a session.

- *Examinees with visual disabilities.* The ACT Assessment is available in braille and large-type editions and on audio cassettes. These editions have been reviewed by a consultant who has a visual disability. Examinees may, if they prefer, use the regular-type edition and a reader. They may have assistance in marking their responses, and are given extended time for completing the tests. (Average time for

completing the large-type edition is approximately 5 hours; for the braille edition, approximately 7-1/2 hours.) In 1982-83, 489 persons with visual disabilities took the ACT Assessment under special conditions.

- *Examinees with auditory disabilities.* Examinees whose hearing loss has caused a reading handicap may arrange individual testing conditions with extended time. Instructions, but not the test items themselves, may be given in sign language. In 1982-83, 182 persons with auditory disabilities took the ACT Assessment under special conditions.

- *Examinees with other disabilities.* Extended-time testing is authorized for examinees with physical disabilities who may have difficulty or need assistance in marking responses. Examinees with learning disabilities may use a reader, a regular test form, or audio cassettes, and may also arrange individual testing conditions with extended time. In 1982-83, 1611 persons with physical or learning disabilities took the ACT Assessment under special conditions.

ACT does not systematically collect specially-tested examinees' reactions to the special arrangements (site, supervisor, etc.). However, the ACT staff responsible for test administration note that, while they have no recollection of ever receiving a letter criticizing these arrangements, they regularly receive letters (from examinees and their families) indicating that the arrangements were helpful.

On-campus Testing

Many persons with disabilities that necessitate special arrangements take the Assessment after they have been admitted to college and are on campus. About 1% of all on-campus test administrations each year are special administrations. However, ACT does not have detailed information about the nature of on-campus special testing because institutions are not required to report this information to ACT.

College Notification

Section 504 forbids colleges from making any pre-admission inquiry as to the presence of a handicapping or disabling condition, with two exceptions. These exceptions are:

1. When an institution takes remedial action to correct the effects of past discrimination;

2. When an institution takes voluntary action to overcome the effects of conditions that previously resulted in limited participation by students with disabilities.

If the conditions are met as outlined above, pre-admission inquiry may be made, provided that:

1. Information gathered is used for the purpose of fulfilling point one or two above;

2. Information is given voluntarily, kept confidential, and not used against the applicant in any way.

Examinees may choose to notify certain colleges about their need for special services by answering "yes" to an optional item (Item 8 of the Student Profile Section) in the ACT Assessment registration materials. This item reads as follows:

> Many colleges make special provisions or offer programs for students with certain types of physical disabilities. The following item provides colleges with a way to communicate with prospective students about these provisions and programs. Colleges have indicated to ACT that your response will be used only for this purpose.
>
> 8. I have a physical handicap or disability that may require special provisions or services from the college I attend.

Of the 888,040 applicants who took the ACT Assessment on national test dates in 1982-83, about 1% (6290) indicated that they had a handicapping or disabling condition that might require special services from the college they would attend. To ensure that such information is used in accordance with the language in Section 504 that governs pre-admission inquiry, ACT asks postsecondary institutions each year to review the relevant laws and regulations and indicate whether responses to Item 8 of the Student Profile Section should be printed on their ACT Assessment College Reports. Colleges that request this information also receive subsequent mailings referring them to the appropriate laws and regulations.

About 10% of institutions that receive ACT Assessment College Reports request that applicants' responses to Item 8 be printed on their reports. Because ACT requires institutions to specifically request this information and because institutions are asked to review the relevant laws and regulations before and after making this request, it can be concluded that institutions requesting that this information be reported for examinees not specially tested do so under one or both of the exceptions to the prohibition of pre-admission inquiry provided for in Section 504, and that they plan to use this information to better meet the needs of students with disabilities.

Practice Materials

ACT does not have sample test materials in special editions for examinees with disabilities. However, to familiarize examinees with the format and content of the ACT Assessment tests, regular-print sample questions are included in the student registration booklet, *Taking the ACT Assessment*. In addition, a copy of an entire test booklet (regular-print) containing items used on a previous national test date is provided free of charge to each high school for student reference. Two other sample forms (regular-print) of the ACT tests are available to examinees who send a written request and a nominal fee to ACT.

Comparisons Among Examinees With and Without Disabilities: Self-reported High School Grades and ACT Assessment Scores

Almost all applicants for college admission must show that they have completed the requirements for a high school diploma (or for an equivalency certificate). Usually, they must provide a transcript of courses taken and grades received (or a report of test scores, if an equivalency certificate is presented).

While high school grades reflect a student's accomplishments across a wide range of tasks and over a relatively long timespan, it is generally difficult to compare students from different curricula or different schools on the basis of high school grades alone. The courses taken and the grading standards applied can differ, sometimes dramatically. Nevertheless, high school grades are still one of the best predictors of college grades; as in many areas of human endeavor, past success tends to be associated with future success.

In the college admissions context, standardized tests (such as the ACT Assessment, which includes tests in the subject areas of English, mathematics, social studies, and natural sciences) are intended as a way to determine how examinees of varying backgrounds perform when faced with identical tasks and conditions. Research indicates that ACT Assessment scores alone predict college success about as well as high school grades alone, but that the two used in conjunction predict better than either used separately (Sawyer and Maxey, 1979, page 10).

The rest of this section presents data related to self-reported high school grades and ACT Assessment scores for five groups of ACT-tested examinees:

- Examinees who indicated that they did *not* have a disability that might require special services from the college they planned to attend.
- Examinees who indicated that they had such a disability, but who were not specially tested.
- Specially-tested examinees with motor (physical and learning) disabilities.
- Specially-tested examinees with visual disabilities.
- Specially-tested examinees with auditory disabilities.

Data were collected for five testing years, beginning with 1978-79 and ending with 1982-83. (See Appendixes A and B for detailed tables.)

High School Grades

Persons who take the ACT Assessment are asked to list the last high school course grade they received (prior to their senior year) in each of four subject areas: English, mathematics, social studies, and natural sciences. Of those who respond to this item, some report "Not taken" for one or more areas. When examinees do report a grade in a particular area, they are not asked to provide information about the level of that course. Consequently, there is no way at present for ACT to distinguish an examinee whose most recent mathematics course was Algebra I from an examinee whose most recent mathematics course was Introduction to Calculus. (ACT is exploring alternative items that would identify both the level of the course taken and the grade obtained.) Therefore, comparing individual examinees' educational backgrounds by comparing their self-reported high school grades is not appropriate. For comparing *groups* of examinees, this procedure is appropriate only if it can be assumed that the courses taken were generally similar for the groups.

Can we make this assumption for groups of ACT-tested examinees with and without disabilities? At present, ACT data cannot provide an answer to this question. It is possible only to calculate the percentage in each group who report that they have not taken *any*

course in one of the four areas for which grades are collected. On the basis of the 1982-83 percentages (shown in Table 2), it appears that, with one exception (mathematics), the examinees most likely to report that they have not taken courses in a particular area are those with auditory disabilities.

Therefore, although ACT can calculate self-reported high school grade averages for several groups of students, these data should not be interpreted as meaning that the educational experiences of the groups were similar. In fact, there is some reason to believe that they probably were not. Ragosta (1980, pages 102-103) cites the following statement from Gallaudet College:

> [High school grades] are of little value in predicting success in a liberal arts program among deaf applicants. This is true in part because deaf applicants come from a wide variety of secondary school curricula and in part because grading standards for these students are more than usually erratic. For example, deaf students attending public school classes may be graded in strict competition with their hearing classmates or may, conversely, be given "charity" grades; grades received in schools for the deaf are not comparable to those attained in a hearing setting.

Combined-sex data for each group's mean 1982-83 self-reported grades are shown by subject area in Figure 1; detailed tables showing self-reported high school grades by subject area and sex, over a five-year period, are provided in Appendix A. (These self-reported grade averages have not shown major fluctuations over the past five years within groups, nor has the relative standing of the groups changed when overall GPA is compared.) Examinees who do not have a disability report the highest overall grade averages (about 3.0 on a 4-point scale). Examinees who were not specially tested, but who report that they have a disability that may require special services from their college, are next (about 2.8), followed by specially-tested examinees with visual and auditory disabilities (about 2.7). The lowest grades (about 2.4) are reported for the motor (physical and learning) disabilities category. For each group, the grades for mathematics and natural sciences are slightly lower than those for English and social studies. However, as previously noted, these data must be interpreted with caution; there is no evidence that the courses for which grades were reported are similar across groups.

TABLE 2

Percentages of Various Groups Reporting "Not Taken" for High School Courses in Four Subject Areas (1982-83)

	English			Mathematics			Social Studies			Natural Sciences		
Group	M	F	T	M	F	T	M	F	T	M	F	T
No Disability	0	0	0	4	5	5	4	3	4	11	12	11
Disability, Not Specially Tested	1	1	1	5	7	6	3	3	3	13	14	13
Motor (Physical and Learning) Disability	1	1	1	7	7	7	5	3	5	15	15	15
Visual Disability	2	1	2	4	7	5	1	1	1	15	11	13
Auditory Disability	5	3	4	2	8	6	16	12	13	8	21	16

Note. M = males; F = females; T = total.

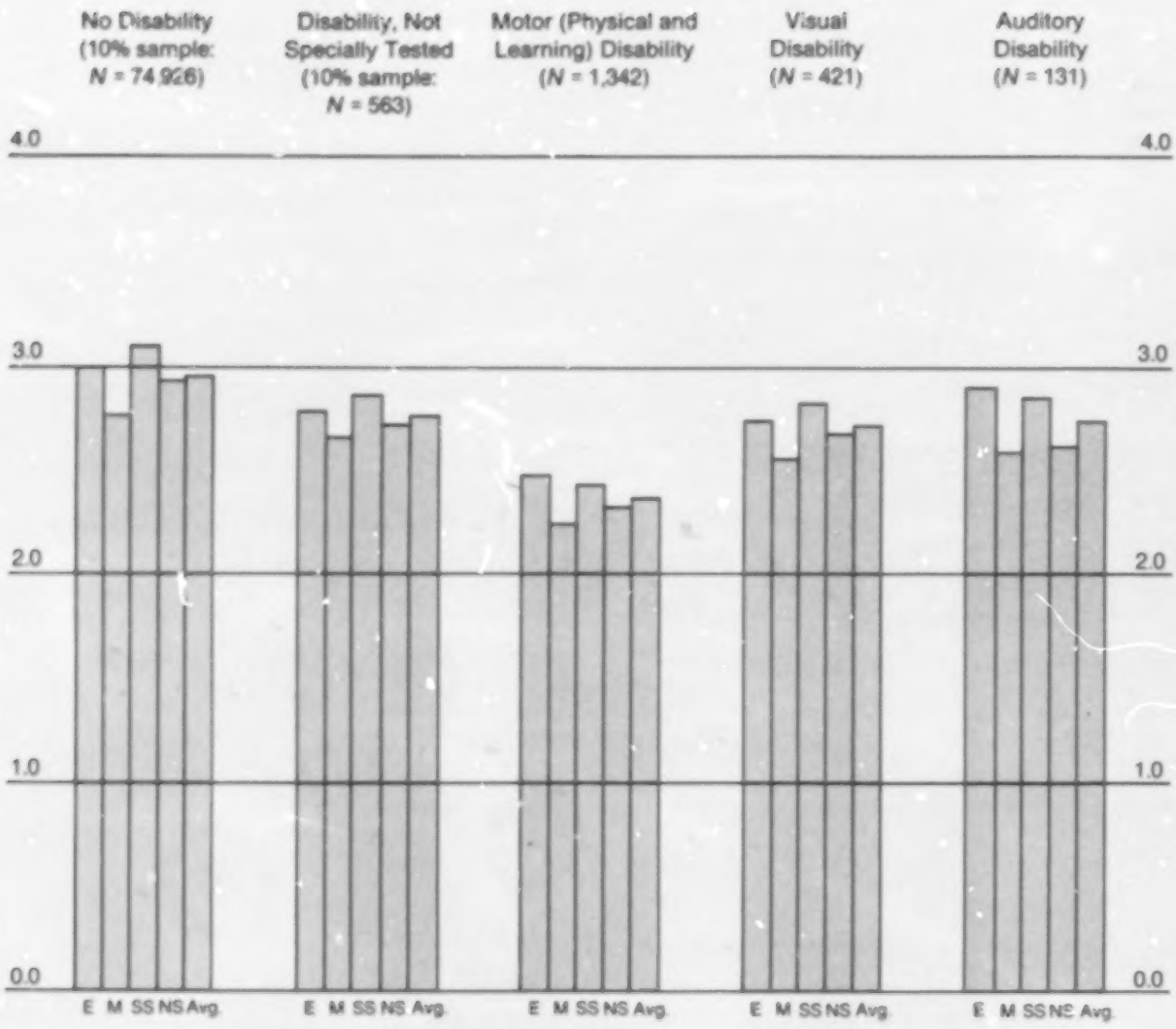

No Disability (10% sample: N = 74,926)
Disability, Not Specially Tested (10% sample: N = 563)
Motor (Physical and Learning) Disability (N = 1,342)
Visual Disability (N = 421)
Auditory Disability (N = 131)
4.0
3.0
2.0
1.0
0.0
E M SS NS Avg.

Figure 1. Mean self-reported high school grades, by group (1982-83).

ACT Assessment Scores

The ACT Assessment includes four tests of educational development: English, mathematics, social studies, and natural sciences. Scores are calculated separately for each test; the Composite score is an arithmetic average of the four test scores. The Assessment also collects information about the examinee's background, interests, and educational goals. (For an overview of the ACT Assessment and its uses, see either *The ACT Assessment Counselor's Handbook* or *Using the ACT Assessment on Campus*; for detailed psychometric data, see the *Technical Report for the ACT Assessment* and/or the *Technical Report for the Unisex Edition of the ACT Interest Inventory (UNIACT)*. Copies of these materials are available from the Publications Department, The American College Testing Program, P.O. Box 168, Iowa City, Iowa 52243.)

In contrast to the findings for self-reported high school grades, there have been test score variations over the past five years within some of the five groups studied. (Appendix B provides detailed tables of ACT Assessment scores for each group, by subject area and sex, for the past five years.) Three groups (examinees without disabilities; examinees with disabilities, but not specially tested; and examinees with visual disabilities) have had relatively stable mean Composite scores on the ACT Assessment for the five-year period, with variations amounting to less than one standard-score unit per group and no consistent upward or downward trend in scores. These are also the highest-scoring groups, with approximate mean Composite scores over the five-year period as follows: without disabilities—18.5; with disabilities, but not specially tested—16; with visual disabilities—17. The motor (physical and learning) disabilities category has shown a decline in mean Composite score from approximately 15 at the beginning of the five-year period to 14 at its end. Mean Composite scores for examinees with auditory handicaps have been least stable, perhaps due to low *N*s in some years. They have ranged from a low of 10.6 in 1978-79 (N = 24) to a high of 13.1 in 1979-80 (N = 52). For the last two years, mean Composite scores for this group have been about 11.5.

In order to indicate the relative standing of each group on the four tests and the Composite score, the percentile ranks of the groups' mean standard scores were calculated. Percentile ranks of mean standard scores indicate the value of these scores relative to the distribution of ACT Assessment scores for all examinees who take the tests on national test dates. For example, the percentile rank of 40 for the mean standard score in social studies for examinees with motor (physical and learning) disabilities indicates that 40% of the examinees in the norming group obtained a social studies test score equal to or lower than the mean social studies test score of this group; 60% of the examinees in the norming group obtained social studies scores higher than the mean score of this group. The differences in mean standard scores among groups are sufficient to result in substantial percentile rank differences.

The 1982-83 percentile ranks of the mean combined-sex standard scores for the five groups (shown in Figure 2) permit comparison of test performance across the four subject areas for each group. Mean scores for examinees without disabilities are all near the fiftieth percentile on national norms. (National norms are based on a 10% sample of all regularly-tested students, including those without disabilities, those with disabilities, and those who do not provide this information.) The percentile rank of the English score is lowest for three of the four groups of examinees with disabilities; the exception is the group of examinees with visual disabilities, whose lowest percentile rank is in the mathematics area.

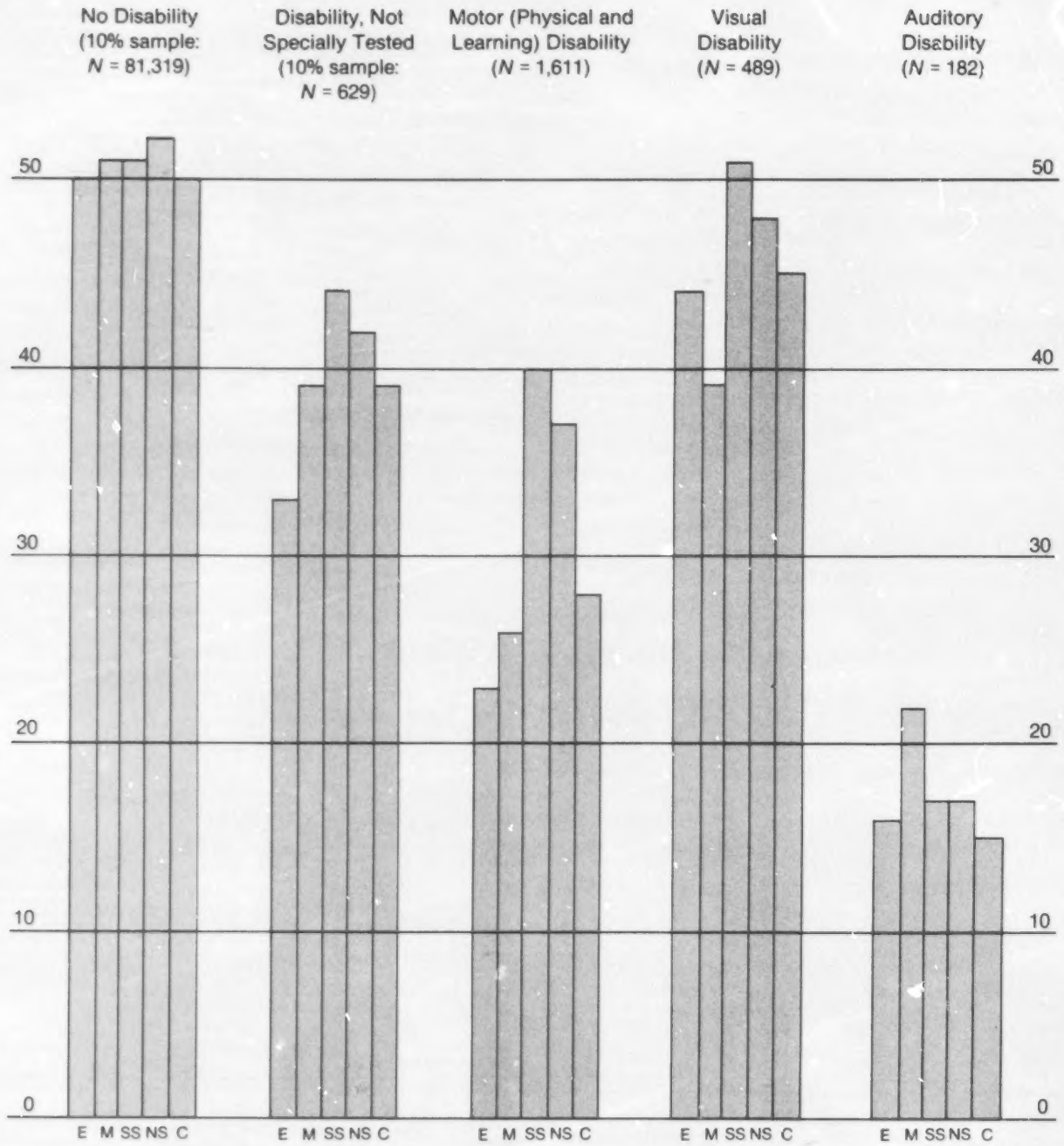


Figure 2. Percentile ranks of mean standard scores on the ACT Assessment, by group (1982-83).

Comparison of the Predictive Validity of Self-reported Grades and ACT Assessment Scores for Examinees With and Without Disabilities

Many institutions using ACT Assessment results request that first-year college grade predictions for prospective students be developed using regression equations established on the grades of previously-enrolled students. Consequently, some of ACT's test record files contain predicted grades for examinees at particular institutions. *If* these examinees enroll at these institutions, and *if* the institutions continue to participate in certain of ACT's Research Services, ACT eventually receives a report of the actual first-year college grades earned by the examinees. Thus, if one could compare the predicted and earned grades at a given college for the five groups of examinees described in this report, it would be possible to learn whether the prediction equation used was equally accurate for all groups at that college.

Unfortunately, this has not been possible because of the small number of specially-tested examinees who enroll in a given college in any single year. However, by pooling across institutions and across years (1978-79, 1980-81, and 1981-82), it was possible to identify a number of specially-tested examinees for whom both predicted and earned first-year grades (at the college they chose to attend) are available. The *N*s are still small; the procedure yielded data for 280 examinees with motor disabilities, 172 with visual disabilities, and 9 with auditory disabilities. The last group was too small for meaningful analysis.

Mean predicted and earned grades for the other groups are shown in Figure 3. Data for regularly-tested examinees are shown for one year, 1976-77 (from Maxey and Levitz, 1980), because *N*s for these examinees were adequate without pooling across years. On the average, the earned grades for the regularly-tested examinees were slightly higher than the predicted grades, and the earned grades for specially-tested examinees were slightly lower than the predicted grades.

The predictive accuracy of the regression equations established on data from regularly-tested examinees is similar for both groups of regularly-tested examinees; the correlation between predicted and earned grades is .59 for both (Maxey and Levitz, 1980). (*Note:* All predicted grades are based on the general prediction equation developed for the school that the examinee is actually attending.)

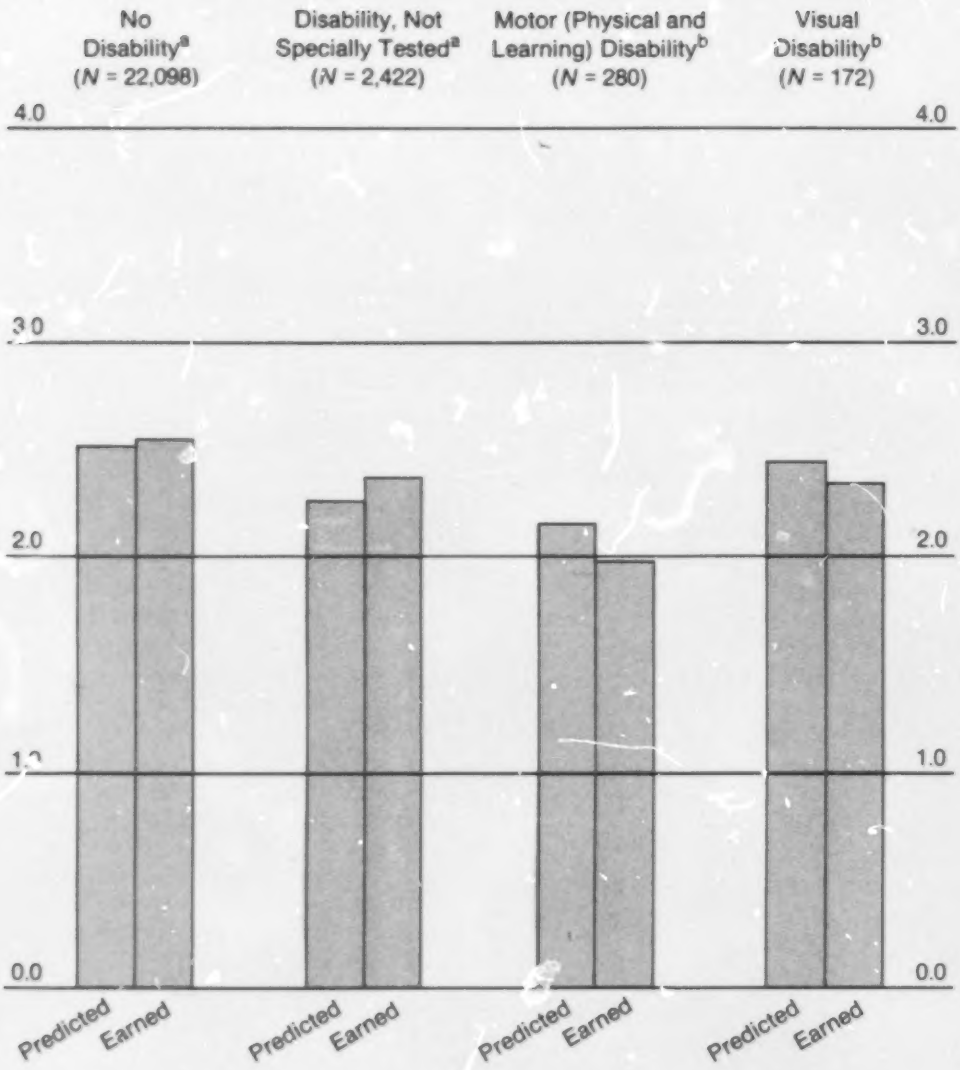
When the regression equations established on data from regularly-tested examinees are used to predict grades, the correlation between predicted and earned college GPA for specially-tested examinees with motor (physical and learning) disabilities is .39. Prediction for the specially-tested examinees with visual disabilities is more accurate; the correlation between predicted and earned grades is .52. The 9 examinees with auditory disabilities are a very small sample, insufficient for drawing conclusions about the ability of the regression equations to predict college GPA for similar examinees. However, even though the sample size is too small to provide a basis for any conclusions, the very low observed correlation (.02) between predicted and earned college grades for this sample suggests that additional research is needed.

More detailed information about predicted and earned grades for the specially-tested examinees with visual and motor (physical and learning) disabilities is provided in Appendix C.

Discussion and Recommendations for Further Research

It appears that the general prediction equations work equally well for examinees without disabilities and for examinees with disabilities, when both groups take the ACT Assessment under regular testing conditions. Although predicted grades are lower for the latter group, so are their high school grades, ACT Assessment scores, and earned college grades. The correlation between predicted and earned grades is .59 for both of the regularly-tested groups.

The specially-tested examinees present a more mixed picture. Prediction is best for specially-tested examinees with visual disabilities. The correlation of .52 between predicted and earned college grades for this group (using the general prediction equation for the school that the examinee attended) is fairly high. The correlation of .39 between predicted and earned grades for examinees with motor (physical and learning) disabilities indicates that, for this group, predicted



[a]Data from Maxey and Levitz, 1980.
[b]Pooled data for 1978-79, 1980-81, and 1981-82.

Figure 3. Mean predicted and earned college grade point averages.

grades are less accurate and other data should receive more emphasis when colleges make admissions and placement decisions. On the average, the predicted grades for the specially-tested examinees are higher than their earned grades.

Experts in the area of auditory disabilities have expressed serious reservations about the use of standardized test results in predicting college grades for students whose auditory disabilities have resulted in language deficits. Our sample of 9 specially-tested students with auditory disabilities for whom predicted grades and earned grades are available is far too small to allow conclusions; however, ACT plans to conduct further research in this area.

In many ways, this paper raises more questions than it answers. For instance, we don't know how comparable the educational backgrounds of students with differing disabilities (or without disabilities) may be; we don't know whether the decrease in mean ACT Assessment Composite score for examinees with motor (physical and learning) disabilities is related to the increasing proportion of persons with learning disabilities in this group over the past five years; we don't know whether the lack of practice materials in nonstandard format is perceived as a problem by examinees who are tested with special materials. Before ACT can address such questions as these, plans must be made for systematic data collection and related research. A list of recommendations follows.

1. Try to determine whether any group of students that now registers for regular testing might be better served by special testing. For example:

   a. Ask regularly-tested students who state that they have a disability to indicate the nature of this disability (voluntarily, for research purposes; this information would not be released to colleges). Test results of these students would provide a basis for determining whether any particular disability is associated with low scores on the ACT Assessment taken under regular conditions.

   b. Identify students who have taken the ACT Assessment under both special and regular conditions, and compare results to learn whether any particular disability is associated with an unusually large discrepancy between special-testing scores and regular-testing scores.

2. Attempt to identify any systematic patterns in high school preparation of students with different disabilities.

3. Learn from specially-tested examinees whether there are ways that ACT can serve them more effectively. We might, for instance:

   a. Survey a sample of examinees who used special test materials to learn whether the format of these materials was familiar to them. If it was not, perhaps ACT could arrange to provide some practice materials in braille, large-type, and cassette formats. Such materials, in addition to their use for practice, might also help some examinees decide which special test materials would best meet their needs.

   b. Ask all specially-tested examinees for their reactions to the test materials and conditions. Analyze responses to determine whether improvements can be made.

4. When sufficient data are available, study the self-reported high school grades, ACT Assessment scores, and predictability of college grades separately for examinees with physical and learning disabilities. (Separate collection of these data began in the 1983-84 testing year.)

5. If possible, identify a large enough group of examinees with auditory disabilities that have resulted in language deficits so that the advisability of using the ACT Assessment to predict grades for this group can be determined. If the use of the regular Assessment proves inadvisable, consider whether the Assessment could appropriately be given in sign language.

6. Establish a communications channel with college personnel who serve the needs of students with disabilities. This could provide ACT with information about the special testing arrangements available on college campuses.

7. Develop procedures to follow specially-tested examinees through at least the freshman year of college. In particular, attempt to learn whether ACT Assessment results were useful in the admissions, placement, and advising process for these students.

8. Identify colleges that have large numbers of students who took the ACT Assessment under special conditions. These student pools could make it possible for ACT and the colleges to engage in collaborative research.

9. Explore the possibility of developing specific prediction equations for specially-tested students with

each type of disability. (This may not be technically possible. If it can be done, it will require use of techniques that can be used with smaller *N*s than are now needed to develop the general prediction equations. Even then, it might be necessary to pool data across similar postsecondary institutions in order to locate a sufficiently large sample.) If such equations can be developed, determine whether they predict these students' college grades more accurately than the equations now in use.

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Appendix A

TABLES SHOWING DISTRIBUTIONS OF HIGH SCHOOL GRADES

TABLE A.1

Distribution of High School Grades for Examinees Without Disabilities Based on Self-reported Grades, in Percentages, From 1978-79 Through 1982-83 (10% Sample)

Subject	Reported Grade	1978-79			1979-80			1980-81			1981-82			1982-83		
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
English	A(4.0)	25	39	33	25	38	32	23	37	31	24	36	31	23	36	30
	B(3.0)	44	43	43	43	43	43	44	44	44	43	44	44	43	43	43
	C(2.0)	26	16	20	27	17	21	27	17	22	28	17	22	28	18	22
	D(1.0)	4	2	3	4	2	3	5	2	3	4	2	3	5	2	3
	F(0.0)	0	0	0	1	0	0	1	0	0	1	0	0	1	0	0
	Mean	2.90	3.19	3.06	2.87	3.16	3.03	2.85	3.15	3.01	2.85	3.15	3.01	2.84	3.13	3.00
	SD	0.85	0.78	0.82	0.86	0.79	0.83	0.85	0.79	0.83	0.85	0.78	0.83	0.86	0.80	0.84
Mathematics	A(4.0)	23	24	23	22	24	23	23	24	23	23	25	24	24	24	24
	B(3.0)	34	35	34	34	34	34	34	35	35	34	35	35	34	35	35
	C(2.0)	29	27	28	29	27	28	29	27	28	29	27	28	28	27	28
	D(1.0)	8	7	7	8	7	8	9	7	8	8	7	7	8	7	8
	F(0.0)	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1
	Mean	2.73	2.79	2.76	2.71	2.78	2.75	2.71	2.79	2.76	2.74	2.80	2.77	2.73	2.79	2.76
	SD	0.96	0.93	0.95	0.97	0.94	0.95	0.97	0.94	0.95	0.96	0.94	0.95	0.98	0.94	0.96
Social Studies	A(4.0)	35	40	38	35	38	37	34	38	36	34	38	36	34	37	36
	B(3.0)	38	37	38	38	38	38	38	38	38	39	38	38	39	38	38
	C(2.0)	19	17	18	20	18	19	20	18	19	20	18	19	20	18	19
	D(1.0)	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	F(0.0)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Mean	3.10	3.18	3.14	3.08	3.15	3.11	3.07	3.14	3.11	3.06	3.14	3.11	3.06	3.13	3.10
	SD	0.84	0.82	0.83	0.85	0.84	0.84	0.85	0.83	0.84	0.84	0.83	0.84	0.85	0.83	0.84
Natural Sciences	A(4.0)	25	27	26	24	27	26	24	27	26	24	27	26	24	27	26
	B(3.0)	36	36	36	36	37	36	36	37	36	36	36	36	36	37	36
	C(2.0)	24	21	22	24	21	23	24	21	23	24	21	22	24	21	22
	D(1.0)	4	3	4	4	3	4	4	3	4	4	3	4	5	3	4
	F(0.0)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Mean	2.91	2.99	2.95	2.89	2.98	2.94	2.88	2.98	2.94	2.90	2.98	2.94	2.89	2.97	2.93
	SD	0.87	0.85	0.86	0.88	0.85	0.86	0.88	0.85	0.86	0.87	0.84	0.86	0.88	0.85	0.87
Average	3.5-4.0	27	33	30	26	32	29	26	32	29	26	32	29	26	32	29
	2.5-3.4	51	50	50	50	50	50	49	50	50	50	50	50	49	50	49
	1.5-2.4	21	16	18	23	16	19	23	17	20	23	17	19	23	18	20
	0.5-1.4	1	1	1	2	1	1	2	1	1	2	1	1	2	1	1
	0.0-0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Mean	2.91	3.05	2.98	2.89	3.03	2.96	2.88	3.02	2.95	2.89	3.03	2.96	2.88	3.01	2.95
	SD	0.68	0.64	0.66	0.68	0.65	0.67	0.68	0.65	0.67	0.68	0.65	0.67	0.69	0.66	0.68
N		31,428	37,829	69,257	33,273	39,856	73,129	33,944	40,856	74,800	32,615	39,306	71,921	34,238	40,688	74,926

Note. M = males; F = females; T = total. Percentages for the high school grades shown in this table generally will not sum to 100, as not all examinees reported grades for all four subjects.

TABLE A.2

Distribution of High School Grades for Examinees With Disabilities (Not Specially Tested) Based on Self-reported Grades, in Percentages, From 1978-79 Through 1982-83 (10% Sample)

Subject	Reported Grade	1978-79			1979-80			1980-81			1981-82			1982-83		
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
English	A(4.0)	21	26	24	19	29	24	14	29	21	18	31	25	16	32	23
	B(3.0)	38	44	41	38	39	38	46	46	46	38	38	38	36	42	39
	C(2.0)	32	26	29	32	26	29	29	21	25	38	26	32	36	22	30
	D(1.0)	7	3	5	8	6	7	9	4	6	5	4	4	10	3	7
	F(0.0)	2	1	1	1	0	1	0	0	0	0	1	1	0	0	0
	Mean	2.72	2.92	2.81	2.66	2.90	2.78	2.67	2.99	2.82	2.68	2.95	2.82	2.58	3.03	2.78
	SD	0.93	0.84	0.89	0.93	0.89	0.92	0.84	0.82	0.85	0.83	0.90	0.88	0.89	0.82	0.89
Mathematics	A(4.0)	15	17	16	16	18	17	17	18	17	17	17	17	18	24	21
	B(3.0)	32	32	32	28	32	30	32	36	34	31	34	32	30	35	32
	C(2.0)	34	32	33	37	29	33	32	30	31	29	27	28	34	24	30
	D(1.0)	11	9	10	11	10	11	11	9	10	13	12	13	11	7	9
	F(0.0)	1	2	2	2	3	2	2	1	1	3	1	2	2	2	2
	Mean	2.53	2.57	2.55	2.48	2.56	2.52	2.55	2.65	2.60	2.49	2.57	2.53	2.53	2.80	2.65
	SD	0.94	0.99	0.97	0.97	1.02	1.00	0.97	0.92	0.95	1.04	0.99	1.02	0.99	0.97	0.99
Social Studies	A(4.0)	25	30	28	26	35	30	19	30	24	24	30	27	23	36	29
	B(3.0)	35	39	37	39	32	36	42	39	41	41	37	39	36	32	34
	C(2.0)	29	23	26	27	24	26	27	22	25	25	23	24	28	24	26
	D(1.0)	6	5	5	4	4	4	6	3	5	5	4	4	10	5	8
	F(0.0)	1	1	1	0	0	0	1	1	1	0	1	0	0	0	0
	Mean	2.82	2.95	2.88	2.91	3.01	2.96	2.76	3.00	2.87	2.89	2.96	2.93	2.73	3.02	2.86
	SD	0.92	0.91	0.92	0.84	0.91	0.88	0.88	0.86	0.88	0.84	0.90	0.87	0.93	0.92	0.94
Natural Sciences	A(4.0)	19	20	20	19	23	21	15	22	18	19	22	21	20	21	20
	B(3.0)	34	32	33	31	34	32	38	35	36	28	34	31	31	33	32
	C(2.0)	27	28	27	29	26	27	24	28	26	29	22	25	26	26	26
	D(1.0)	6	6	6	6	4	5	8	4	6	8	6	7	10	5	8
	F(0.0)	1	0	1	0	1	0	1	0	0	2	1	1	1	1	1
	Mean	2.74	2.76	2.75	2.72	2.87	2.79	2.69	2.84	2.76	2.63	2.81	2.72	2.67	2.79	2.72
	SD	0.92	0.89	0.90	0.90	0.88	0.90	0.89	0.85	0.88	1.00	0.95	0.98	0.97	0.91	0.95
Average	3.5-4.0	20	24	22	15	26	20	14	23	18	19	23	21	17	28	21
	2.5-3.4	44	47	46	51	48	50	54	57	56	45	52	48	47	50	48
	1.5-2.4	35	26	31	32	24	28	28	18	23	30	22	26	33	20	27
	0.5-1.4	1	2	2	2	2	2	4	2	3	5	3	4	4	2	3
	0.0-0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Mean	2.70	2.81	2.75	2.70	2.84	2.77	2.67	2.88	2.77	2.67	2.84	2.75	2.62	2.93	2.76
	SD	0.71	0.68	0.70	0.67	0.73	0.70	0.68	0.65	0.68	0.71	0.70	0.71	0.71	0.68	0.72
N		279	276	555	327	289	616	275	258	533	256	260	516	309	254	563

Note. M = males; F = females; T = total. Percentages for the high school grades shown in this table generally will not sum to 100, as not all examinees reported grades for all four subjects.

TABLE A.3

Distribution of High School Grades for Examinees With Motor (Physical & Learning) Disabilities (Specially Tested) Based on Self-reported Grades, in Percentages, From 1978-79 Through 1982-83

Subject	Reported Grade	1978-79			1979-80[a]			1980-81			1981-82			1982-83		
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
English	A(4.0)	9	23	13				14	19	16	11	15	12	9	15	11
	B(3.0)	34	38	35				30	37	32	34	43	37	36	37	36
	C(2.0)	45	32	41				44	34	41	42	34	40	42	39	41
	D(1.0)	9	6	9				10	9	10	9	8	9	11	8	10
	F(0.0)	1	0	1				1	1	1	1	1	1	1	0	1
	Mean	2.41	2.78	2.52				2.47	2.65	2.53	2.48	2.63	2.52	2.42	2.59	2.47
	SD	0.81	0.87	0.85				0.89	0.91	0.90	0.85	0.86	0.85	0.84	0.85	0.84
Mathematics	A(4.0)	12	13	12				8	12	9	11	9	10	8	12	9
	B(3.0)	26	28	27				28	30	29	28	30	29	24	27	25
	C(2.0)	39	37	38				39	31	36	37	39	38	41	37	40
	D(1.0)	13	13	13				16	18	17	14	13	14	17	15	16
	F(0.0)	2	2	2				2	1	1	3	2	2	3	2	2
	Mean	2.36	2.39	2.37				2.27	2.37	2.30	2.33	2.33	2.33	2.20	2.34	2.24
	SD	0.95	0.96	0.96				0.92	0.96	0.93	0.96	0.90	0.95	0.93	0.96	0.94
Social Studies	A(4.0)	13	22	15				13	15	13	13	12	12	10	13	11
	B(3.0)	31	33	31				33	30	32	34	29	32	34	30	33
	C(2.0)	39	32	37				40	36	39	37	42	39	39	39	39
	D(1.0)	13	8	11				11	11	11	11	13	11	11	15	12
	F(0.0)	1	2	1				0	1	0	1	0	1	1	0	1
	Mean	2.44	2.68	2.51				2.49	2.51	2.49	2.48	2.41	2.46	2.43	2.42	2.43
	SD	0.91	0.97	0.93				0.87	0.93	0.89	0.90	0.88	0.90	0.86	0.92	0.88
Natural Sciences	A(4.0)	10	15	12				9	11	10	9	9	9	8	8	8
	B(3.0)	26	30	27				25	23	25	25	26	26	26	25	25
	C(2.0)	39	29	36				39	39	39	41	38	40	38	43	40
	D(1.0)	11	10	11				12	11	12	10	8	9	12	9	11
	F(0.0)	1	0	1				1	1	1	1	0	1	1	1	1
	Mean	2.38	2.60	2.45				2.33	2.37	2.34	2.38	2.44	2.40	2.31	2.35	2.32
	SD	0.89	0.91	0.90				0.89	0.90	0.90	0.86	0.84	0.85	0.88	0.83	0.87
Average	3.5-4.0	8	13	10				8	12	9	7	7	7	6	7	6
	2.5-3.4	39	49	42				38	40	38	43	46	44	40	45	42
	1.5-2.4	46	33	42				49	43	47	45	44	44	49	43	48
	0.5-1.4	6	4	5				6	5	6	5	4	5	5	4	5
	0.0-0.4	0	1	0				0	0	0	0	0	0	0	0	0
	Mean	2.40	2.60	2.46				2.39	2.48	2.42	2.41	2.46	2.43	2.35	2.44	2.38
	SD	0.66	0.69	0.67				0.64	0.69	0.66	0.64	0.62	0.64	0.62	0.63	0.62
N		394	174	568				586	250	836	784	325	1109	941	401	1342

Note. M = males; F = females; T = total. Percentages for the high school grades shown in this table generally will not sum to 100, as not all examinees reported grades for all four subjects.

[a]The tape containing high school grades for examinees with motor disabilities for 1979-80 was accidentally discarded following that year's processing cycle.

TABLE A.4

Distribution of High School Grades for Examinees With Visual Disabilities (Specially Tested) Based on Self-reported Grades, in Percentages, From 1978-79 Through 1982-83

Subject	Reported Grade	1978-79			1979-80[a]			1980-81			1981-82			1982-83		
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
English	A(4.0)	19	30	24				18	31	24	12	23	17	14	25	19
	B(3.0)	43	44	43				36	41	39	44	46	45	41	45	43
	C(2.0)	30	20	26				37	23	30	35	26	31	32	24	28
	D(1.0)	5	3	4				6	4	5	6	3	5	10	5	8
	F(0.0)	0	1	1				1	1	1	0	1	1	0	0	0
	Mean	2.77	3.01	2.88				2.66	2.98	2.81	2.62	2.87	2.74	2.61	2.89	2.74
	SD	0.84	0.84	0.85				0.88	0.87	0.89	0.80	0.85	0.83	0.88	0.85	0.88
Mathematics	A(4.0)	17	15	16				16	14	15	15	17	16	17	20	18
	B(3.0)	31	43	37				23	36	29	29	28	28	26	35	30
	C(2.0)	29	28	29				35	34	35	35	32	34	36	27	32
	D(1.0)	13	5	10				17	11	15	12	13	13	15	11	13
	F(0.0)	1	1	1				2	2	2	3	2	2	2	0	1
	Mean	2.53	2.73	2.62				2.36	2.52	2.44	2.44	2.49	2.46	2.43	2.68	2.55
	SD	1.00	0.82	0.93				1.03	0.94	0.99	1.00	1.01	1.01	1.01	0.95	0.99
Social Studies	A(4.0)	24	32	27				23	27	25	21	28	24	27	27	27
	B(3.0)	35	41	38				36	36	36	29	35	32	30	40	35
	C(2.0)	31	20	26				28	26	27	34	27	31	33	28	30
	D(1.0)	6	5	5				9	7	8	11	6	9	8	5	7
	F(0.0)	0	0	0				0	1	1	0	1	1	0	0	0
	Mean	2.78	3.02	2.89				2.74	2.85	2.79	2.62	2.85	2.73	2.76	2.90	2.83
	SD	0.90	0.85	0.89				0.94	0.93	0.94	0.96	0.94	0.96	0.96	0.85	0.91
Natural Sciences	A(4.0)	15	16	15				18	17	17	15	19	17	17	20	19
	B(3.0)	26	34	29				27	39	33	28	29	29	29	34	32
	C(2.0)	34	26	30				28	30	29	34	30	32	28	29	28
	D(1.0)	12	8	10				14	5	10	10	9	9	10	5	8
	F(0.0)	1	1	1				0	2	1	1	1	1	1	0	1
	Mean	2.47	2.67	2.56				2.54	2.68	2.61	2.52	2.66	2.59	2.59	2.77	2.68
	SD	0.96	0.91	0.95				1.00	0.92	0.96	0.94	0.95	0.94	0.97	0.88	0.93
Average	3.5-4.0	20	22	21				16	21	18	13	20	17	14	22	18
	2.5-3.4	40	51	45				42	51	47	41	47	44	47	51	49
	1.5-2.4	37	26	32				38	25	32	43	30	36	34	27	31
	0.5-1.4	2	1	1				4	3	3	3	3	3	5	0	2
	0.0-0.4	0	0	0				0	0	0	0	1	0	0	0	0
	Mean	2.67	2.86	2.75				2.58	2.76	2.67	2.55	2.73	2.63	2.60	2.83	2.71
	SD	0.72	0.66	0.70				0.74	0.71	0.73	0.70	0.72	0.72	0.71	0.64	0.69
N		188	156	344				195	179	374	209	192	401	217	204	421

Note. M = males; F = females; T = total. Percentages for the high school grades shown in this table generally will not sum to 100, as not all examinees reported grades for all four subjects.

[a]The tape containing high school grades for examinees with visual disabilities for 1979-80 was accidentally discarded following that year's processing cycle.

TABLE A.5

Distribution of High School Grades for Examinees With Auditory Disabilities (Specially Tested) Based on Self-reported Grades, in Percentages, From 1978-79 Through 1982-83

Subject	Reported Grade	1978-79			1979-80[a]			1980-81			1981-82			1982-83		
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
English	A(4.0)	8	29	15				15	33	26	16	13	14	22	21	21
	B(3.0)	31	29	30				50	37	43	40	48	44	44	46	45
	C(2.0)	54	43	50				30	30	30	40	33	36	25	30	28
	D(1.0)	8	0	5				5	0	2	2	2	2	3	0	1
	F(0.0)	0	0	0				0	0	0	2	0	1	0	0	0
	Mean	2.38	2.86	2.55				2.75	3.04	2.91	2.64	2.75	2.70	2.89	2.90	2.90
	SD	0.74	0.83	0.80				0.77	0.79	0.79	0.85	0.70	0.78	0.79	0.72	0.75
Mathematics	A(4.0)	8	57	25				11	4	7	16	8	11	19	19	19
	B(3.0)	54	29	45				47	44	46	40	36	38	34	29	31
	C(2.0)	38	14	30				26	30	28	38	45	42	34	33	33
	D(1.0)	0	0	0				11	7	9	4	4	4	10	12	11
	F(0.0)	0	0	0				0	0	0	0	0	0	2	0	1
	Mean	2.69	3.43	2.95				2.61	2.52	2.56	2.68	2.51	2.59	2.59	2.59	2.59
	SD	0.61	0.73	0.74				0.83	0.71	0.77	0.79	0.70	0.75	0.97	0.95	0.96
Social Studies	A(4.0)	25	14	21				20	26	23	20	6	12	24	20	22
	B(3.0)	50	57	53				45	30	36	44	50	47	24	41	34
	C(2.0)	17	29	21				30	22	26	29	35	32	29	26	27
	D(1.0)	0	0	0				0	11	6	0	2	1	7	1	3
	F(0.0)	0	0	0				0	0	0	0	0	0	0	0	0
	Mean	3.09	2.86	3.00				2.89	2.79	2.84	2.90	2.64	2.76	2.78	2.91	2.85
	SD	0.67	0.64	0.67				0.72	1.00	0.89	0.72	0.62	0.68	0.95	0.75	0.84
Natural Sciences	A(4.0)	23	29	25				10	7	9	18	9	13	20	10	14
	B(3.0)	38	57	45				40	30	34	34	39	37	31	31	31
	C(2.0)	31	0	20				25	37	32	30	30	30	34	31	32
	D(1.0)	0	0	0				5	11	9	7	11	9	7	7	7
	F(0.0)	8	0	5				0	0	0	0	0	0	0	0	0
	Mean	2.69	3.33	2.89				2.69	2.39	2.51	2.72	2.52	2.61	2.70	2.55	2.61
	SD	1.07	0.47	0.97				0.77	0.82	0.81	0.88	0.84	0.86	0.88	0.82	0.85
Average	3.5-4.0	15	29	20				5	13	10	14	4	9	22	16	18
	2.5-3.4	46	57	50				68	52	60	56	65	61	38	57	49
	1.5-2.4	38	14	30				26	35	31	28	31	29	36	28	31
	0.5-1.4	0	0	0				0	0	0	2	0	1	4	0	2
	0.0-0.4	0	0	0				0	0	0	0	0	0	0	0	0
	Mean	2.69	3.11	2.84				2.72	2.67	2.70	2.73	2.60	2.66	2.71	2.76	2.74
	SD	0.54	0.50	0.56				0.54	0.59	0.57	0.58	0.42	0.51	0.72	0.53	0.62
N		13	7	20				19	23	42	43	49	92	55	76	131

Note. M = males; F = females; T = total. Percentages for the high school grades shown in this table generally will not sum to 100, as not all examinees reported grades for all four subjects.

[a]The tape containing high school grades for examinees with auditory disabilities for 1979-80 was accidentally discarded following that year's processing cycle.

Appendix B

TABLES SHOWING PERCENTILE RANKS OF ACT ASSESSMENT SCORES

TABLE B.1

Representative ACT Score Percentile Ranks for Examinees Without Disabilities From 1978-79 Through 1982-83 (10% Sample)

		1978-79			1979-80			1980-81			1981-82			1982-83		
Test	**Score**	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
English	25	94	92	93	94	91	92	94	91	93	94	91	92	93	91	92
	20	64	57	60	65	57	60	66	58	61	66	58	61	65	58	61
	15	34	27	30	34	27	30	35	28	31	35	27	31	34	28	30
	Mean	17.4	18.4	18.0	17.3	18.4	17.9	17.3	18.3	17.8	17.3	18.4	17.9	17.3	18.2	17.8
	SD	5.4	5.3	5.3	5.4	5.4	5.4	5.3	5.3	5.4	5.3	5.3	5.3	5.5	5.4	5.5
Mathematics	25	73	86	80	74	85	80	74	86	80	75	86	81	76	86	81
	20	52	68	61	53	67	61	51	67	60	52	65	59	52	66	59
	15	32	46	39	32	46	40	32	46	40	34	46	41	35	48	42
	Mean	19.1	16.3	17.6	18.9	16.2	17.4	18.9	16.1	17.4	18.6	16.1	17.2	18.4	15.7	16.9
	SD	7.6	7.2	7.5	7.7	7.3	7.6	7.9	7.6	7.9	8.0	7.7	8.0	8.2	7.9	8.2
Social Studies	25	79	87	84	78	86	82	78	87	83	79	86	83	80	88	84
	20	55	65	61	55	66	61	55	66	61	56	64	60	56	66	61
	15	36	45	41	37	47	42	36	46	42	38	46	42	38	46	42
	Mean	18.2	16.4	17.2	18.3	16.4	17.3	18.3	16.4	17.3	18.2	16.6	17.3	18.1	16.4	17.1
	SD	7.3	7.0	7.2	7.4	7.1	7.3	7.5	7.1	7.3	7.5	7.1	7.3	7.5	7.1	7.3
Natural Sciences	25	62	76	70	62	78	71	63	78	71	62	79	71	61	78	70
	20	36	51	45	36	51	44	37	51	45	38	53	46	36	53	45
	15	14	20	18	13	21	18	14	21	18	15	23	19	14	24	19
	Mean	22.3	20.2	21.2	22.5	20.1	21.1	22.3	20.0	21.0	22.2	19.8	20.9	22.4	19.7	20.9
	SD	6.4	5.9	6.2	6.3	5.9	6.2	6.3	5.8	6.1	6.4	5.9	6.3	6.5	6.2	6.5
Composite	25	80	88	85	80	88	85	80	88	85	81	88	85	81	88	85
	20	52	63	58	53	64	59	52	64	59	54	64	59	53	64	59
	15	26	33	30	25	34	30	26	34	30	27	34	31	27	36	32
	Mean	19.4	18.0	18.6	19.4	17.9	18.6	19.3	17.8	18.5	19.2	17.8	18.5	19.2	17.6	18.3
	SD	5.9	5.5	5.7	5.9	5.6	5.8	5.9	5.6	5.8	6.0	5.7	5.8	6.1	5.8	6.0
N		34,148	42,046	76,194	36,099	44,176	80,275	36,695	44,995	81,690	35,259	43,243	78,502	36,844	44,475	81,319

Note. M = males; F = females; T = total.

TABLE B.2

Representative ACT Score Percentile Ranks for Examinees With Disabilities (Not Specially Tested) From 1978-79 Through 1982-83 (10% Sample)

		1978-79			1979-80			1980-81			1981-82			1982-83		
Test	**Score**	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
English	25	96	94	95	98	95	97	96	96	96	95	93	94	97	93	95
	20	79	71	75	74	75	74	78	74	76	74	72	73	79	70	75
	15	52	42	47	47	50	48	53	49	51	52	42	47	55	43	50
	Mean	14.7	16.1	15.4	15.2	15.4	15.3	15.0	15.2	15.1	15.2	16.3	15.7	14.4	16.2	15.3
	SD	5.9	5.9	5.9	5.7	5.9	5.8	5.6	5.8	5.7	6.0	6.0	6.0	6.1	6.2	6.2
Mathematics	25	84	92	88	86	92	89	86	94	90	85	93	89	89	92	91
	20	68	84	76	69	82	75	69	83	76	70	81	75	73	77	75
	15	50	61	55	48	67	57	52	68	60	52	66	59	56	62	58
	Mean	16.0	13.5	14.7	15.8	13.0	14.4	15.2	12.5	13.9	15.1	12.8	13.9	14.5	13.1	13.8
	SD	7.8	6.9	7.5	7.6	7.0	7.4	8.1	7.1	7.8	8.4	7.2	7.9	7.7	7.8	7.8
Social Studies	25	86	90	88	86	88	87	85	91	88	85	90	88	87	88	87
	20	69	77	73	68	76	72	66	76	70	71	74	73	73	73	73
	15	53	61	57	50	62	56	48	60	53	54	59	56	58	54	56
	Mean	15.4	14.1	14.8	15.7	14.0	14.9	16.1	13.8	15.0	15.2	14.4	14.8	14.7	14.9	14.8
	SD	7.7	7.1	7.4	7.7	7.7	7.7	7.8	7.4	7.7	8.0	7.2	7.6	7.8	7.5	7.7
Natural Sciences	25	75	85	80	75	83	79	74	88	81	72	85	79	76	83	79
	20	57	69	63	54	66	60	51	65	58	56	69	63	56	62	59
	15	28	37	32	28	35	32	26	36	31	32	35	33	30	33	32
	Mean	19.8	17.8	18.8	19.8	17.9	18.9	20.1	17.7	19.0	19.5	17.9	18.7	19.3	18.3	18.8
	SD	6.7	6.1	6.5	6.9	6.3	6.7	6.7	6.0	6.5	7.1	5.8	6.5	7.2	6.4	6.8
Composite	25	87	94	90	89	92	91	89	95	92	88	93	91	90	91	90
	20	70	79	74	69	78	73	67	79	73	69	79	74	73	74	74
	15	45	51	48	41	54	47	42	54	48	48	51	49	48	50	49
	Mean	16.6	15.4	16.0	16.8	15.2	16.0	16.7	14.9	15.9	16.4	15.5	15.9	15.8	15.7	15.8
	SD	6.2	5.7	6.0	6.2	5.9	6.1	6.2	5.7	6.1	6.6	5.6	6.1	6.4	6.2	6.3
N		316	304	620	380	341	721	321	291	612	288	298	586	346	283	629

Note. M = males; F = females; T = total.

TABLE B.3

Representative ACT Score Percentile Ranks for Examinees With Motor (Physical and Learning) Disabilities (Specially Tested) From 1978-79 Through 1982-83

		1978-79			1979-80			1980-81			1981-82			1982-83		
Test	**Score**	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
English	25	99	99	99	99	96	98	99	98	98	99	98	99	99	99	99
	20	88	82	86	87	81	85	90	85	89	88	86	87	89	89	89
	15	55	56	55	61	53	58	66	63	65	68	63	67	66	66	66
	Mean	14.1	14.6	14.2	13.7	14.6	13.9	13.0	13.5	13.2	13.3	13.6	13.4	13.4	13.2	13.3
	SD	5.0	5.0	5.0	5.1	5.6	5.3	5.0	5.5	5.1	4.9	5.1	4.9	4.8	5.0	4.9
Mathematics	25	92	96	93	96	94	95	95	96	96	96	98	97	95	98	96
	20	87	90	88	87	89	88	87	91	88	89	91	89	87	94	89
	15	67	79	70	66	76	69	74	82	76	76	79	77	72	81	75
	Mean	13.1	11.0	12.5	12.7	11.5	12.4	11.6	10.1	11.2	10.9	9.8	10.6	11.5	9.6	10.9
	SD	6.5	6.3	6.5	6.2	6.2	6.2	6.6	6.4	6.6	6.6	6.5	6.6	6.8	6.0	6.6
Social Studies	25	89	94	90	90	91	91	90	94	91	90	92	91	91	96	92
	20	71	81	74	70	79	73	73	82	75	76	83	78	75	86	78
	15	55	68	60	54	67	58	55	67	59	62	73	66	59	72	63
	Mean	14.9	13.5	14.5	15.3	13.6	14.8	15.0	13.2	14.5	14.1	12.5	13.6	14.3	12.0	13.6
	SD	7.2	6.2	6.9	6.9	6.8	6.9	6.9	6.5	6.8	7.1	6.8	7.1	7.0	6.4	6.9
Natural Sciences	25	80	89	83	79	89	82	80	86	82	84	93	86	83	94	86
	20	58	75	63	57	76	63	59	70	62	64	77	68	63	84	69
	15	33	50	38	27	42	31	29	38	32	33	44	36	32	49	37
	Mean	18.8	16.2	18.0	19.4	16.7	18.5	19.3	17.7	18.8	18.4	16.5	17.8	18.5	15.8	17.7
	SD	6.9	6.1	6.8	6.4	5.8	6.4	6.1	5.9	6.1	6.0	5.3	5.9	6.0	4.8	5.8
Composite	25	95	98	96	96	95	95	95	96	95	96	97	96	96	99	97
	20	77	85	80	79	87	82	82	87	83	84	90	86	83	92	85
	15	52	67	57	52	63	56	58	67	61	63	71	65	59	72	63
	Mean	15.3	14.0	14.9	15.4	14.2	15.0	14.9	13.8	14.5	14.3	13.2	14.0	14.5	12.8	14.0
	SD	5.5	5.0	5.4	5.1	5.1	5.1	5.2	5.2	5.2	5.2	5.0	5.2	5.2	4.6	5.1
N		470	203	673	581	251	832	699	306	1005	940	388	1328	1131	480	1611

Note. M = males; F = females; T = total.

TABLE B.4

Representative ACT Score Percentile Ranks for Examinees With Visual Disabilities (Specially Tested) From 1978-79 Through 1982-83

		1978-79			1979-80			1980-81			1981-82			1982-83		
Test	**Score**	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
English	25	98	95	96	95	92	94	95	93	94	95	92	94	95	89	92
	20	74	72	73	71	70	70	70	67	69	72	68	70	73	64	69
	15	42	34	38	38	42	40	41	40	41	44	39	41	46	32	39
	Mean	15.7	16.6	16.1	16.3	16.5	16.4	16.1	16.7	16.3	15.9	16.7	16.3	15.7	17.5	16.6
	SD	5.7	5.5	5.6	5.7	6.1	5.9	5.9	5.9	5.9	5.6	5.8	5.7	5.8	6.1	6.0
Mathematics	25	83	91	86	84	91	87	86	90	88	86	90	88	84	87	85
	20	65	81	72	71	83	77	79	80	80	75	83	79	73	82	78
	15	38	50	43	51	69	60	63	64	63	54	66	60	59	66	62
	Mean	17.5	15.6	16.6	16.0	12.9	14.5	14.1	13.5	13.8	15.3	13.0	14.1	14.7	13.3	14.0
	SD	6.8	5.7	6.4	7.7	7.0	7.6	7.6	7.0	7.4	7.5	7.5	7.6	7.9	7.6	7.7
Social Studies	25	84	88	86	77	81	79	80	83	82	78	87	82	80	84	82
	20	57	57	57	50	64	57	54	61	57	57	65	61	58	62	60
	15	35	32	34	34	49	41	38	48	43	45	50	47	45	46	46
	Mean	17.7	17.7	17.7	18.6	16.4	17.5	18.0	16.7	17.4	17.3	16.1	16.7	17.2	16.6	16.9
	SD	6.9	6.4	6.6	7.4	7.5	7.5	7.4	7.2	7.4	7.7	7.1	7.4	7.7	7.4	7.6
Natural Sciences	25	76	81	78	62	76	69	68	74	71	67	81	74	70	73	71
	20	55	59	57	47	60	53	47	56	51	50	56	53	49	51	50
	15	25	26	25	21	34	27	22	27	24	24	31	28	24	27	25
	Mean	20.0	19.4	19.7	21.6	19.0	20.4	21.0	19.7	20.4	20.8	19.0	19.9	20.6	20.0	20.3
	SD	6.4	5.5	6.0	7.2	7.0	7.2	7.3	6.5	7.0	7.2	6.4	6.9	7.2	6.8	7.0
Composite	25	82	93	91	83	88	86	87	89	88	86	90	88	86	87	86
	20	63	72	67	61	72	66	62	68	65	64	74	69	66	70	67
	15	33	31	32	32	49	40	41	46	43	42	44	43	41	42	42
	Mean	17.9	17.5	17.7	18.2	16.2	17.3	17.4	16.7	17.1	17.5	16.3	16.9	17.2	16.9	17.1
	SD	5.5	4.7	5.1	6.2	6.1	6.2	6.3	5.9	6.1	6.1	5.9	6.0	6.3	6.1	6.2
N		226	186	412	219	199	418	239	198	437	246	235	481	251	238	489

Note. M = males; F = females; T = total.

TABLE B.5

Representative ACT Score Percentile Ranks for Examinees With Auditory Disabilities (Specially Tested) From 1978-79 Through 1982-83

		1978-79			1979-80			1980-81			1981-82			1982-83		
Test	**Score**	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
English	25	99	99	99	98	95	97	99	99	99	99	99	99	99	99	99
	20	99	99	99	91	95	93	90	94	93	97	97	97	94	94	94
	15	90	99	94	59	76	72	75	83	80	87	89	88	78	86	82
	Mean	10.7	9.4	10.2	12.4	11.3	11.8	11.0	11.1	11.1	11.2	10.9	11.0	11.6	11.3	11.5
	SD	3.9	1.6	3.3	5.4	4.6	5.0	5.0	4.1	4.5	4.0	3.6	3.8	4.1	4.3	4.2
Mathematics	25	93	99	96	89	98	95	95	98	97	99	99	99	95	98	97
	20	93	89	92	72	95	85	90	96	94	86	97	92	88	95	92
	15	80	89	83	48	81	67	75	91	84	64	84	75	76	88	83
	Mean	10.1	10.9	10.4	13.9	10.9	12.2	10.9	8.6	9.6	13.6	8.7	10.9	11.2	9.0	10.0
	SD	6.7	5.8	6.4	7.8	5.1	6.6	7.3	5.4	6.4	5.2	5.3	5.8	6.8	5.3	6.1
Social Studies	25	99	99	99	98	98	99	95	99	98	96	98	97	99	99	99
	20	99	99	99	80	91	88	78	96	88	92	98	96	90	94	93
	15	99	99	99	67	84	77	75	89	83	86	93	89	87	90	89
	Mean	8.5	7.1	8.0	13.1	10.2	11.5	12.1	9.7	10.8	9.4	8.5	8.9	9.7	8.8	9.2
	SD	2.8	2.5	2.8	5.9	4.9	5.6	6.6	4.0	5.4	5.6	4.1	4.9	5.1	4.9	5.0
Natural Sciences	25	93	99	96	89	98	95	95	98	97	88	98	94	91	97	95
	20	80	94	85	65	81	75	78	89	84	82	94	88	84	94	90
	15	70	78	73	37	55	47	48	61	55	48	63	56	58	67	63
	Mean	13.8	12.6	13.3	17.7	15.1	16.3	16.8	14.6	15.5	16.4	14.2	15.2	15.2	13.8	14.4
	SD	6.3	3.5	5.5	5.8	4.2	5.2	4.7	4.2	4.6	5.2	3.8	4.6	5.2	4.3	4.8
Composite	25	99	99	99	98	98	99	98	99	99	98	99	99	98	98	98
	20	93	99	96	76	90	86	83	98	91	94	98	96	92	95	94
	15	83	89	85	50	83	68	73	89	82	78	92	85	81	90	86
	Mean	10.9	10.1	10.6	14.5	12.0	13.1	12.8	11.1	11.9	12.8	10.7	11.6	12.0	10.9	11.4
	SD	4.3	2.3	3.7	5.4	3.5	4.6	5.2	3.3	4.3	4.0	3.2	3.7	4.4	3.9	4.2
N		15	9	24	23	29	52	20	27	47	52	61	113	78	104	182

Note. M = males; F = females; T = total.

Appendix C

TABLES SHOWING PREDICTED AND EARNED COLLEGE GPAS FOR SPECIALLY-TESTED EXAMINEES WITH MOTOR (PHYSICAL AND LEARNING) AND VISUAL DISABILITIES

TABLE C.1

Predicted and Earned College GPAs for Specially-tested Examinees With Motor Disabilities (in Percentages)

Range	Predicted GPA	Earned GPA
3.50-4.00	0	6.9
2.50-3.49	26.6	24.7
1.50-2.49	68.8	43.1
0.50-1.49	4.3	18.9
0.00-0.49	0	6.5
Mean	2.17	1.99
SD	.46	.93
Correlation	.39	
N	280	

Note. Pooled data for 1978-79, 1980-81, and 1981-82.

TABLE C.2

Predicted and Earned College GPAs for Specially-tested Examinees With Visual Disabilities (in Percentages)

Range	Predicted GPA	Earned GPA
3.50-4.00	2.4	10.5
2.50-3.49	48.4	46.3
1.50-2.49	45.9	33.7
0.50-1.49	3.6	11.0
0.00-0.49	0	4.7
Mean	2.44	2.35
SD	.50	.92
Correlation	.52	
N	172	

Note. Pooled data for 1978-79, 1980-81, and 1981-82.